Integrating Advanced LLMs in Legal Practice: ChatGPT and the Next Steps in Digitalisation

Kostas C. Argyropoulos
General Counsel SPACE HELLAS GROUP
Chief Legal & Compliance Officer

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We must shape AI tools that will in turn shape us

"AI will reshape all our lives. It will become the primary technology that we use to make decisions and navigate the world – a steam engine of the mind; a cognitive GPS; a tool for orientation. But we have this technology in our hands – not the other way around. And with it, we have the opportunity to amplify and define the future of humanity".

Reid Hoffman, co-founder of LinkedIn, Financial Times, 9-10 Sep. 2023, p.9.

AI tools – advantages & risks

The rapidly growing capabilities and increasing presence of AI-based systems in our lives raise pressing questions about risks & accountability of these technologies around the world.

"The UK's air traffic control system was brought down on the Aug 28th bank holiday in a "one in 15 million" event, its boss said. The system detected that two markers along the planned route had the same name – even though they were in different places. As a result, it could not understand the UK portion of the flight plan. This triggered the system to automatically stop working for safety reasons, so that no incorrect information was passed to national air traffic controllers. The back up system then did the same thing" (BBC news, Sep. 9, 2023).

Global venture capital investments on generative AI

Venture capital investments in generative AI in the first half of 2023 reached a total of USD 12 billion globally. Peaks in venture capital investments in 2019 and 2023 reflect Microsoft's USD 1 billion and USD 10 billion investments in Open AI, respectively.

OECD G7 report prepared for the 2023 Japanese G7 presidency and the G7 digital working group (ed. 7 September 2023).

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Incidents and hazards related to generative AI

The multi-purpose nature of AI has prompted the OECD to develop a global AI Incidents Monitor, designed to furnish real – time evidence on AI risks to inform policy decisions. This is achieved through the scrutiny of real – world incidents and hazards in real time as reported by reputable news outlets.

Over the period from January to July 2023, approximately one thousand incidents and hazards related to generative AI were reported across roughly 5 600 news articles.

The Monitor is still under development – its release is expected in November 2023.

OECD G7 report prepared for the 2023 Japanese G7 presidency and the G7 digital working group (ed. 7 September 2023).
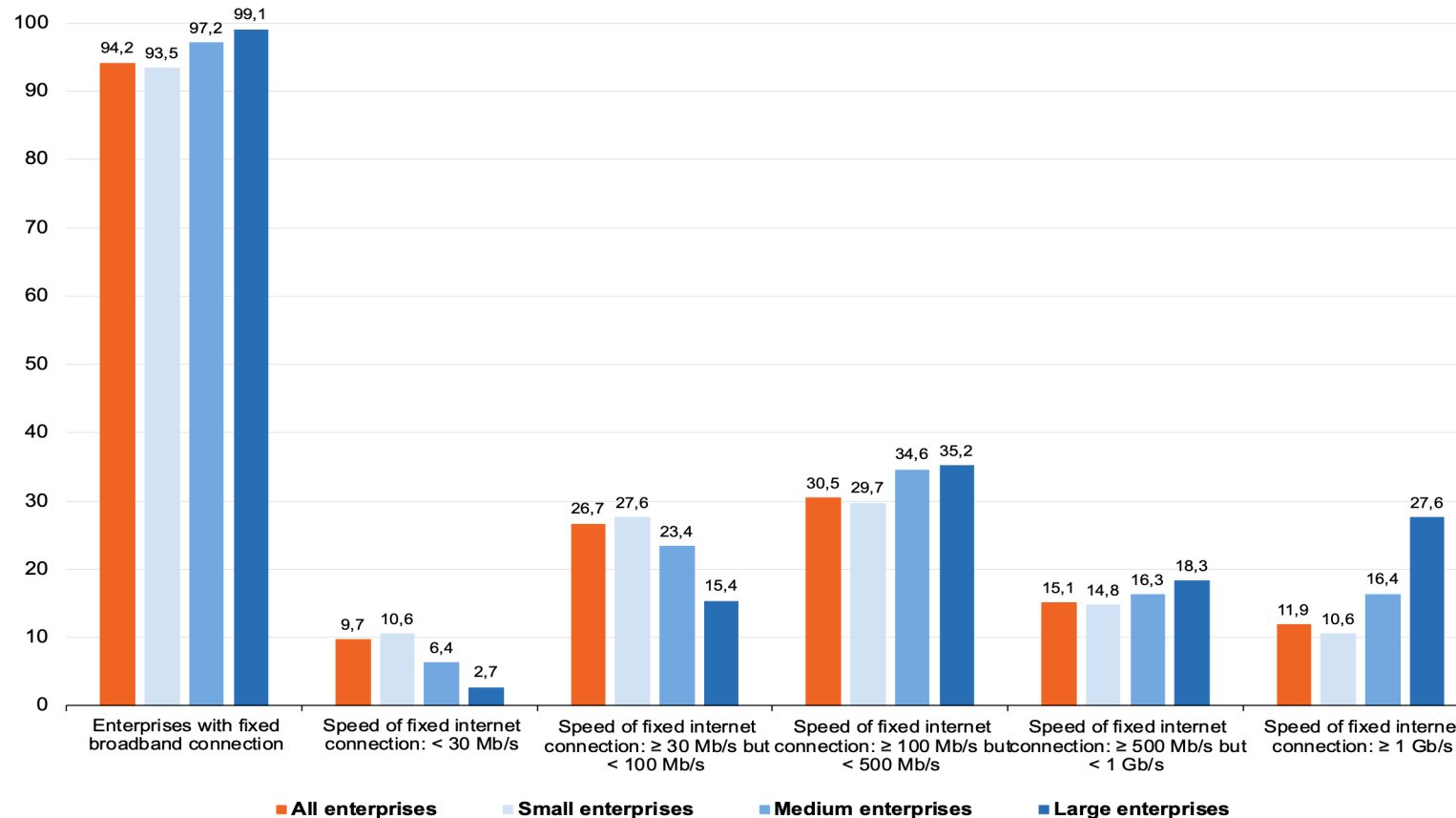
AI in Europe

"*Artificial intelligence (AI) is an area of strategic importance and a key driver of social and economic development. It is transforming every walk of life. The magnitude of this socioeconomic change is coming sooner than most people imagine. To address these challenges AI Watch takes a holistic view of what is happening in AI. We work with key partners from industry, academia, governments and inter-governmental organizations to provide detailed analysis and reliable data*".

Access to country AI strategy reports, AI Landscape, and Investment dashboards; https://ai-watch.ec.europa.eu/index_en

The corporate environment towards the AI economy & society (1)

Enterprises with fixed broadband connection, by size class and speed, EU, 2022
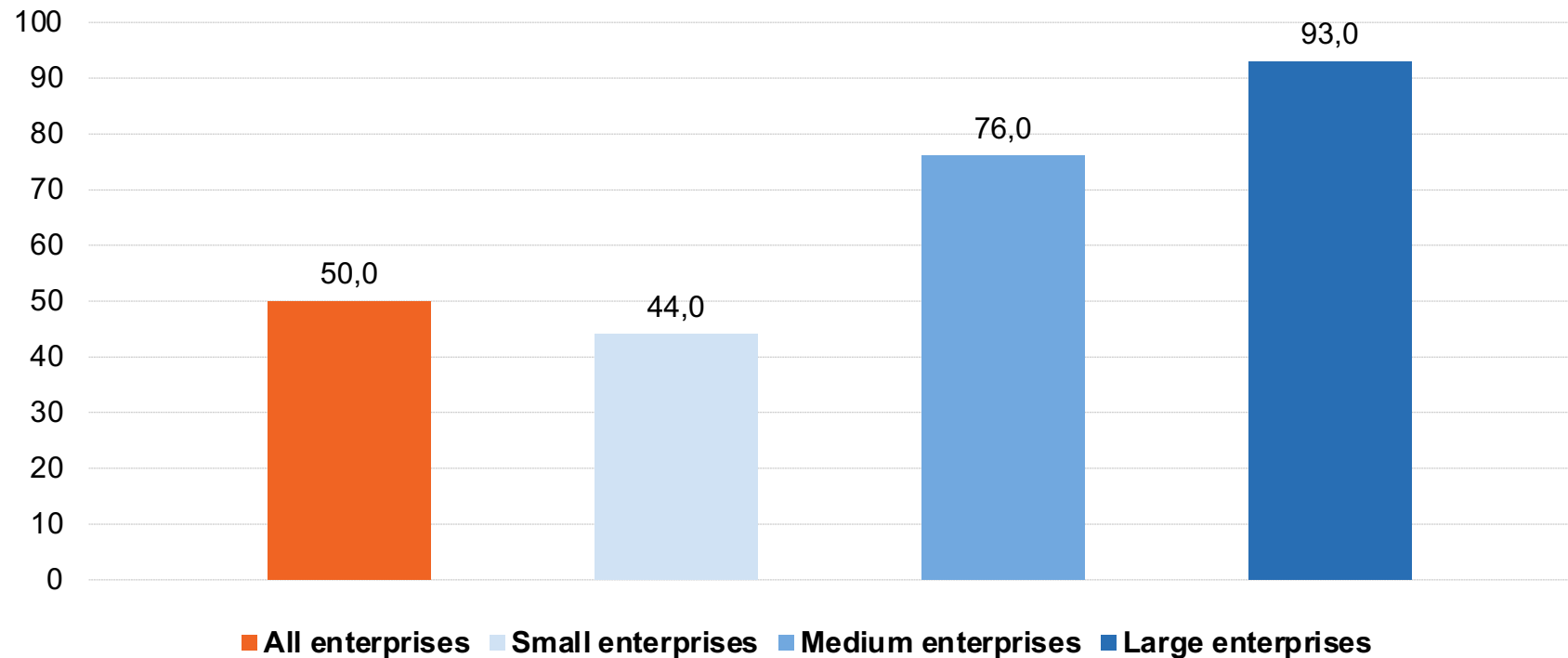(% of enterprises)

Legend: All enterprises | Small enterprises | Medium enterprises | Large enterprises

Categories (x-axis):
- Enterprises with fixed broadband connection: All 94,2 | Small 93,5 | Medium 97,2 | Large 99,1
- Speed of fixed internet connection: < 30 Mb/s: All 9,7 | Small 10,6 | Medium 6,4 | Large 2,7
- Speed of fixed internet connection: ≥ 30 Mb/s but < 100 Mb/s: All 26,7 | Small 27,6 | Medium 23,4 | Large 15,4
- Speed of fixed internet connection: ≥ 100 Mb/s but < 500 Mb/s: All 30,5 | Small 29,7 | Medium 34,6 | Large 35,2
- Speed of fixed internet connection: ≥ 500 Mb/s but < 1 Gb/s: All 15,1 | Small 14,8 | Medium 16,3 | Large 18,3
- Speed of fixed internet connection: ≥ 1 Gb/s: All 11,9 | Small 10,6 | Medium 16,4 | Large 27,6

Source: Eurostat (online data code: isoc_ci_it_es)

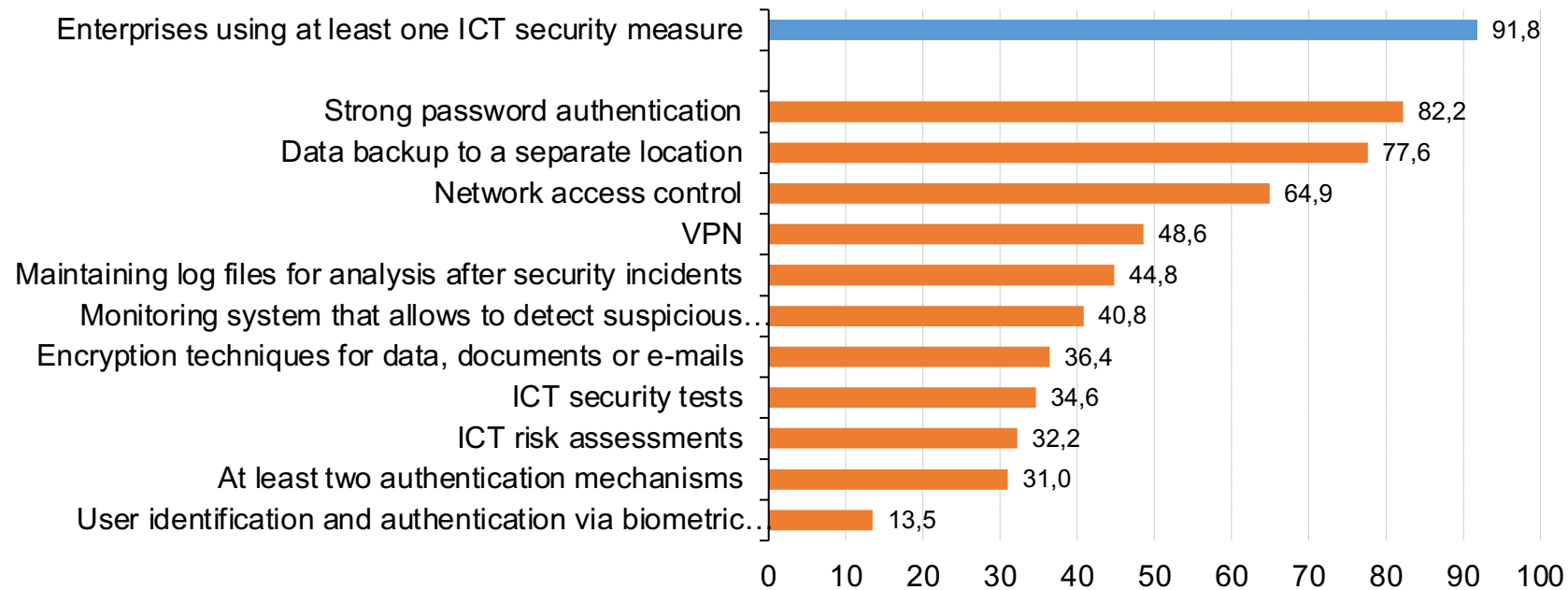# The corporate environment towards the AI economy & society (2)

Enterprises conducting remote meetings via the internet, by size class, EU, 2022
(% enterprises)

Source: Eurostat (online data code: isoc_ci_mvis)

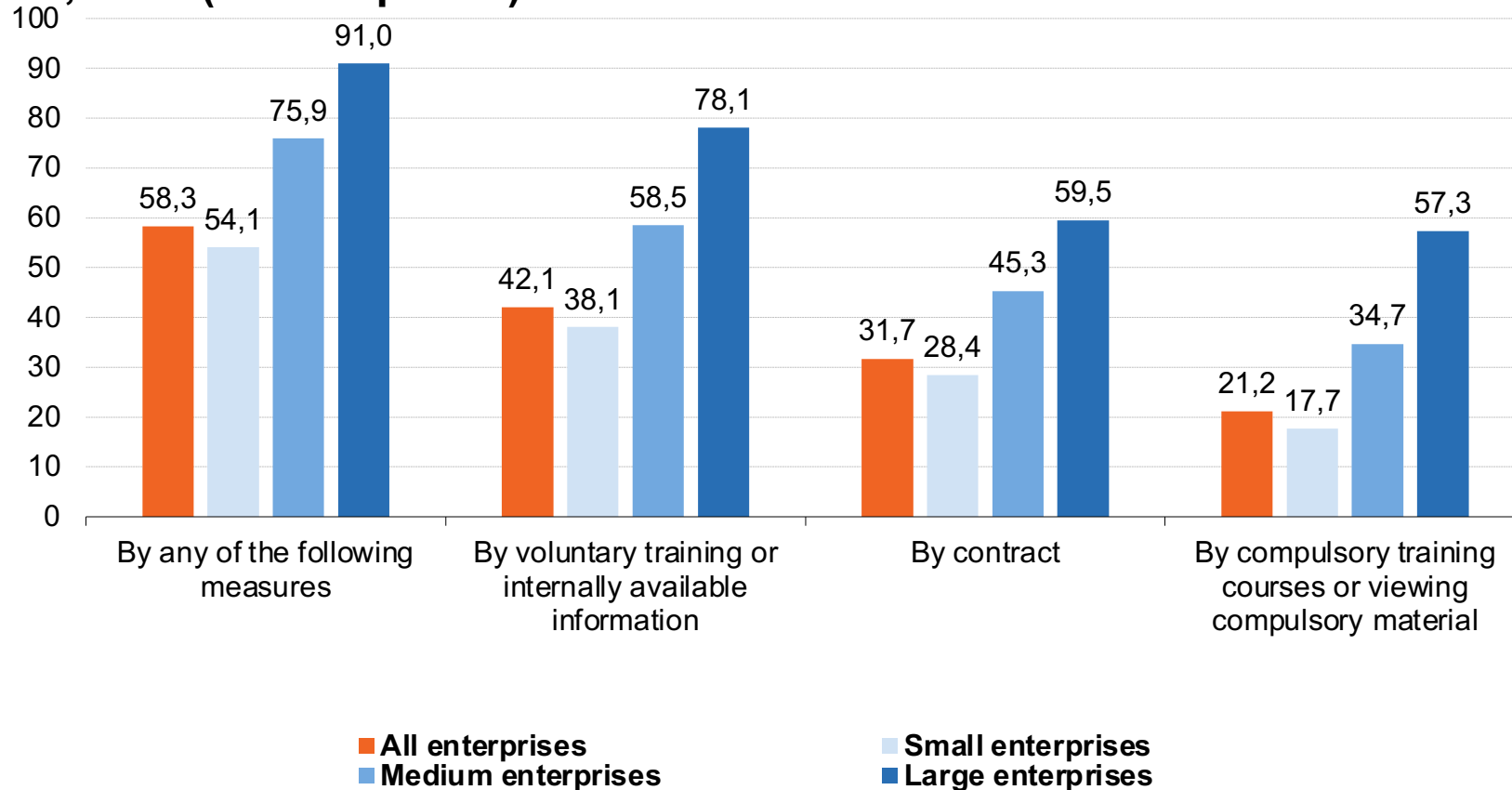# The corporate environment towards the AI economy & society (3)

ICT security measures used by enterprises, EU, 2022
(% enterprises)

Measure	%
Enterprises using at least one ICT security measure	91,8
Strong password authentication	82,2
Data backup to a separate location	77,6
Network access control	64,9
VPN	48,6
Maintaining log files for analysis after security incidents	44,8
Monitoring system that allows to detect suspicious…	40,8
Encryption techniques for data, documents or e-mails	36,4
ICT security tests	34,6
ICT risk assessments	32,2
At least two authentication mechanisms	31,0
User identification and authentication via biometric…	13,5

Source: Eurostat (online data code: isoc_cisce_ra)

The corporate environment towards the AI economy & society (4)

Enterprises making persons employed aware of their obligations in ICT security related issues, by size class, EU, 2022 (% enterprises)
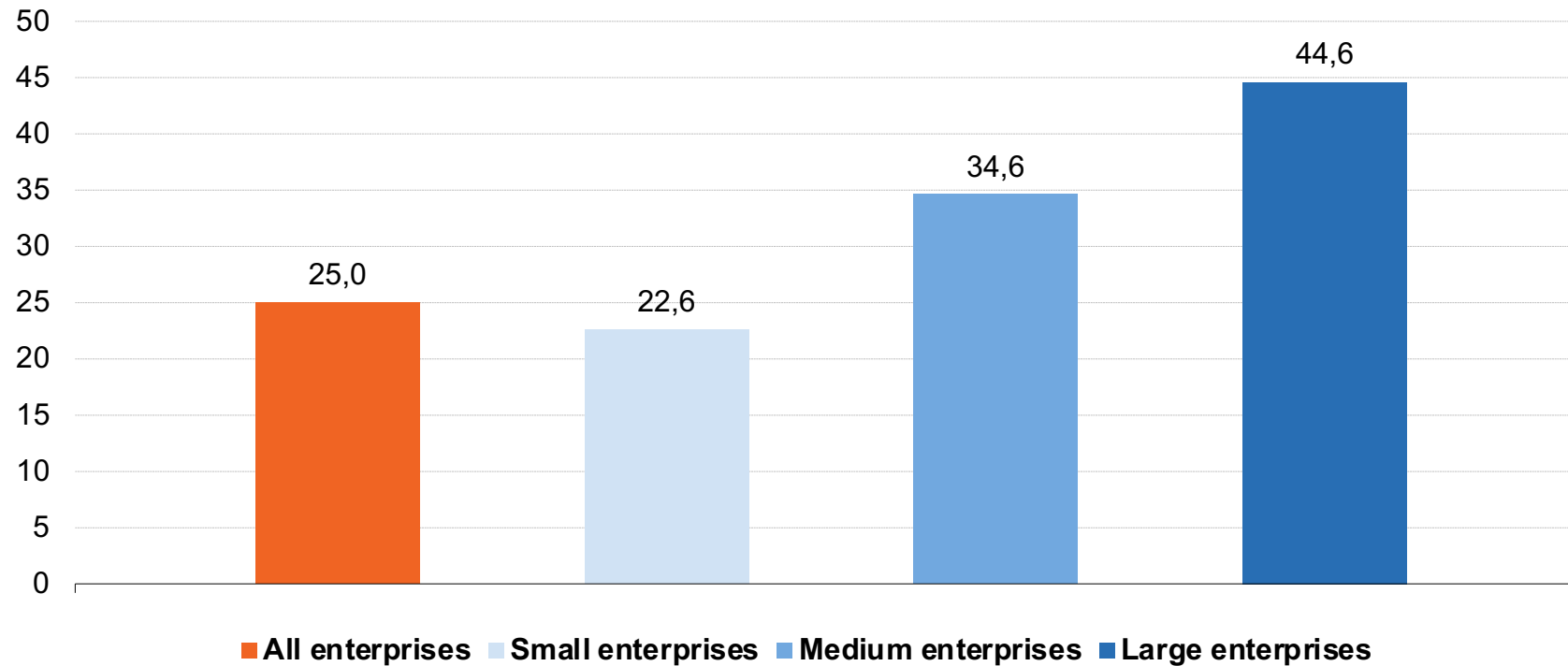

Legend:
- All enterprises
- Small enterprises
- Medium enterprises
- Large enterprises

	By any of the following measures	By voluntary training or internally available information	By contract	By compulsory training courses or viewing compulsory material
All enterprises	58,3	42,1	31,7	21,2
Small enterprises	54,1	38,1	28,4	17,7
Medium enterprises	75,9	58,5	45,3	34,7
Large enterprises	91,0	78,1	59,5	57,3

Source: Eurostat (online data code: isoc_cisce_ra)

The corporate environment towards the AI economy & society (5)

Enterprises having insurance against ICT security incidents, by size class, EU, 2022
(% of enterprises)

- All enterprises: 25,0
- Small enterprises: 22,6
- Medium enterprises: 34,6
- Large enterprises: 44,6

Source: Eurostat (online data code: isoc_cisce_ic)

Integrating AI in legal practice (1)

According to a recent survey, 82% of lawyers believe generative AI can be used for legal work. However, just 51% thought it should. Many worry about "*hallucinations*" and about inadvertently feeding information subject to attorney – client privilege into algorithms. Yet if these challenges can be tackled – and they can, with better technology and careful humans in the loop – then the misgivings of the doubting 49% may pass (Economist, June 10th, 2023).

Integrating AI in legal practice (2)

The industry and policymakers agree that the emerging technology needs regulating. But no one is quite sure how: Discussions in various levels and different set of proposals in the EU, US, UK or China.

China's leading AI chatbot (ERNIE Bot) was released to the public on Aug. 31st. ERNIE was downloaded 1m times within 19 hours of its release, where ChatGPT reached 1m downloads after 5 days, according to OpenAI. It seems that the most stringent restrictions on AI creators might be introduced by China as it seeks to balance the goals between controlling the information put out by generative models and competing in the technology race.

AI tools and technology performance: There is a lot of discussion about the technology that is behind the tools, like the importance of sophisticated chips and how the US vs China race could affect the capability of the tools. For example, ERNIE Bot is based on the use of a specific chip, designed by the Chinese manufacturer, with its production however outsourced to companies like TSMC in Taiwan. Since US restrictions that put limits on the types of chips that foreign foundries can sell to Chinese firms were announced, ERNIE Bot has been downplaying the importance of that chip, which may hint that it is having problems procuring them.

(Financial Times, Sep 13th, 2023, Economist, Sep 9th, 2023).

Integrating AI in legal practice (3)

Size and data is important:

Demand of data is growing so fast that stock of high-quality text available for training may be exhausted by 2026. The latest AI models are likely trained on over 1 trn words. By comparison, the sum of English words on Wikipedia is about 4bn.

The better the data, the better the model. AI chatbots give better answers when asked to explain their working, step by step, increasing demand for sources like textbooks. In July 2023, OpenAI linked a deal with Associated Press to access its archive of stories.

Economist August 19th,2023

Integrating AI in legal practice (4)

Customize AI tools serve the needs better

When companies start to build industry-specific AI tools, the quality and accuracy should markedly improve. We are moving towards customized tools having the capacity to manage the datasets of companies. This is not an easy process, as most firms have historically paid little attention to the types of vast but unstructured datasets that would prove most useful for training AI tools. Often these are spread across various systems, buried in company servers rather than in the cloud. Unlocking that information would help companies customize AI tools to serve their needs better.

This is a booming business; Startups are piling in. In April Weaviate, an AI focused database business, raised $50m at a valuation of $200m. Barely a week later PineCone, a rival, raised $100m at a $75m valuation. Earlier in August, Neon, another database startup, raised an additional $46m in funding. The scramble for data is only just getting started.

Economist, Aug 19th, 2023

Integrating AI in legal practice (5)

The ethics of AI (Trust, Ethics, Data Sovereignty and Data Privacy)

ABA announced a new task force late August to study the complex legal and ethical questions surrounding AI and machine learning systems, which are expected to reallocate tasks.

Self regulation rules: Microsoft announced its commitments to advance safe, secure and trustworthy AI (Microsoft July 31st, 2023) and new (AI powered) Copilot(s) Copyright Commitment for customers (Microsoft Sep 7th, 2023).

A federal judge in Texas told attorneys appearing before him to file a certificate attesting that they either did not use generative AI at all or, that, if they did, they checked the final result. There are reported incidents of lawyer who prepared and submitted a court filing having also the AI tool message that "cases are real and can be found in reputable legal databases". However, the paper contained non-existent cases (Economist, June 10th, 2023).

In March 2023, the Italian DPA imposed an immediate temporary limitation on the processing of Italian users' data by OpenAI. In its order, DPA highlighted that no information was provided to users and data subjects whose data were collected by OpenAI. Less than a month later, and after the company responded to such concern, the tool was available again to its users.

Integrating AI in legal practice (6)

Liability regimes in the age of AI:
A recent Joint Research Centre (JRC) study published in the Journal of Artificial Intelligence Research and presented at Predictable AI Workshop, shows the difficulties in proving causation in liability processes, due to the specific characteristics of AI, by means of representative use cases. The outcome suggests the need to revise liability regimes (AI Watch, March 8th, 2023).
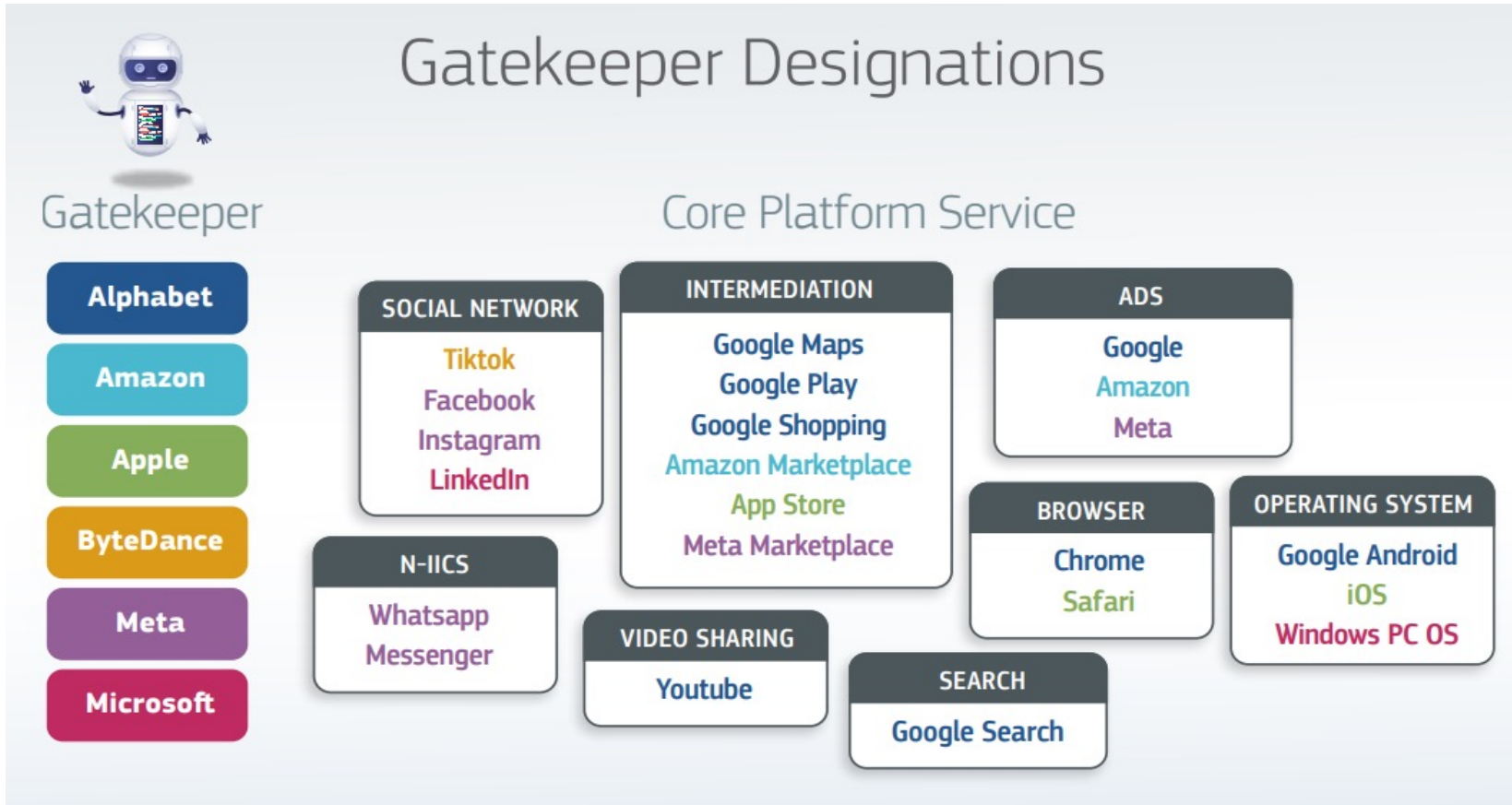
The Proposal for an Artificial Intelligence Liability Directive (AILD):
On 28 September 2022, the Commission delivered on the objectives of the White Paper and on the European Parliament's request with the Proposal for an Artificial Intelligence Liability Directive (AILD). The purpose of the AI Liability Directive proposal is to improve the functioning of the internal market by laying down uniform rules for certain aspects of non-contractual civil liability for damage caused with the involvement of AI systems. The proposal addresses the specific difficulties of proof linked with AI and ensures that justified claims are not hindered.

European proposal for a legal framework on AI:
The Commission aims to address the risks generated by specific uses of AI through a set of complementary, proportionate and flexible rules. These rules will also provide Europe with a leading role in setting the global gold standard. This framework gives AI developers, deployers and users the clarity they need by intervening only in those cases that existing national and EU legislations do not cover. The legal framework for AI proposes a clear, easy to understand approach, based on four different levels of risk: unacceptable risk, high risk, limited risk, and minimal risk.

Integrating AI in legal practice (7) – Service Provider Liability

Gatekeeper Designations

Gatekeeper

Alphabet
Amazon
Apple
ByteDance
Meta
Microsoft

Core Platform Service

SOCIAL NETWORK
Tiktok
Facebook
Instagram
LinkedIn

N-IICS
Whatsapp
Messenger

INTERMEDIATION
Google Maps
Google Play
Google Shopping
Amazon Marketplace
App Store
Meta Marketplace

VIDEO SHARING
Youtube

ADS
Google
Amazon
Meta

BROWSER
Chrome
Safari

SEARCH
Google Search

OPERATING SYSTEM
Google Android
iOS
Windows PC OS

Making AI work in tech oriented legal teams (1)

1. **Training**: ChatGPT is capable in providing information & additional details if someone knows how to engineer the appropriate prompts. But the casual user is unlikely to know what to ask or how to ask it. The same goes for other responses, like the complaint, the draft brief to a court, the draft of a contract. We need to have well trained legal teams, as it is important to tap the right and concrete questions in order to receive answers. Otherwise, the cost of the AI tool will be expensive.

2. **Towards an AI system**: AI should be integrated into a company not as a tool but better as a system, affecting the whole corporate environment. Various divisions and departments will be affected, and lawyers have a primary role (trend). In that sense, a customized AI system is recommended, as it will serve needs better. This means that there will be a need of different site surveys and registration of the company's data in a secure way.

Making AI work in tech oriented legal teams (2)

3. **Cybersecurity:** AI systems should be ensured and designed to be resilient against attempts to alter their use, behavior and performance and to compromise their security properties by malicious third parties exploiting the AI systems' vulnerabilities. As new systems, they are not checked in <u>AI-specific cyberattacks</u>. Thus, security measures of the highest level should be in place. Technical solutions shall be appropriate to the relevant circumstances and risks.

4. **Top 5 risks presented by generative AI:** a) disinformation / manipulation, b) intellectual property rights infringement, c) threats to privacy, d) exacerbating bias and discrimination and e) risks to safety. Disinformation and the associated manipulation of opinions were viewed as the dominant risks posed by generative AI.

(OECD G7 report prepared for the 2023 Japanese G7 presidency and the G7 digital working group (ed. 7 September 2023).

Making AI work in tech oriented legal teams (3)

Define an AI tech oriented legal team

Internal rules	Education	Response time	Security	ICT
Set rules as part of an AI policy – identify the customized needs & back up plans	Invest in training in use cases / accurate results - Select Partners and PA experienced in new technology	The use of AI may change our response time process. Important to identify the outcome as AI and prior checked.	Work in a secure and protected environment tested for threats – Apply extra security measures	Redefine workplaces with upgraded ICT and fastest tools & Work in a unique environment

Empowering
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Thank you for your attention

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